

Implementing Performance Enhancing Safety Cases

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Objectives

- To share some pitfalls of taking a passive approach to safety case development and implementation :
 - Safety Cases as the ‘story’ of how hazards are managed
 - The original vision for safety cases
 - What they became – how they fail
 - Performance Influencing Factors
 - ‘Workforce Engagement’

The Safety Case Journey

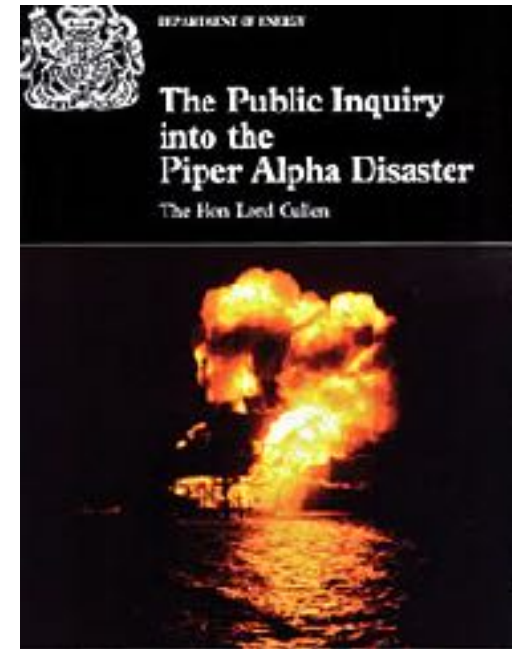


The original vision for Safety Cases

Safety Cases were intended:

- to be the means by which an operator demonstrated to itself the safety of its activities
- to present a Formal Safety Assessment
- to involve personnel from the Duty Holder
- to be part of a continuing dialogue with Regulator
- not to be an end in themselves
- to be part of establishing a strong safety culture

“It is not acceptable that installations should be operated without a thorough assessment of what [the] risks are.”



What Safety Cases Achieved

Prompted a massive change in the rigour of formal safety assessments (FSA)

- Focussed major accident research programmes

Provided a focus and framework for reporting and drawing together results of FSA

Raised profile of process safety and major accident hazard assessment



What some Safety Cases became

Highly Technical, but without “telling a story”

- Primarily technical documents, loaded with detail of formal safety assessments.
- Compartmentalised, disjointed and repetitive
- Inaccessible to the workforce

Adversarial

- Viewed as a document for “going into battle” with the Regulator.
- Written for safety professionals by safety professionals



Missed opportunity for learning and change

- Large parts often outsourced to external (or internal) consultants
- Limited engagement with workforce

Safety Case Shortcomings – HOSL (Buncefield)

- Missed opportunity to identify shortcomings in safety systems
- Documented safety management systems did not reflect the reality of site
- Prepared by a contractor but not reviewed by the HOSL Board,



“In preparing its safety report HOSL missed an ideal opportunity to look critically at its own systems and managerial arrangements intended to ‘prevent major accidents’.”

Buncefield – Why did it happen? HSE website

“a greater interest in the safety report would have allowed [HOSL] to see that some aspects of the report were ‘aspirational’, rather than a true reflection of conditions on site.”

Buncefield – Why did it happen? HSE website

Safety Case Shortcomings – Nimrod XV230

- Safety Case was “a lamentable job from start to finish ... riddled with errors”
- Assumption that Nimrod was safe anyway and that the Safety Case was “documentary”
- Inadequately resourced
- Assessment of many hazards left unresolved



“If the Nimrod Safety Case had been prepared with proper skill, care and attention, the catastrophic fire risk to the Nimrod MR2 fleet ... would have been spotted and XV230 would not have been lost”

The Nimrod Review – Charles Haddon-Cave QC

Safety Case Shortcomings – Some Research

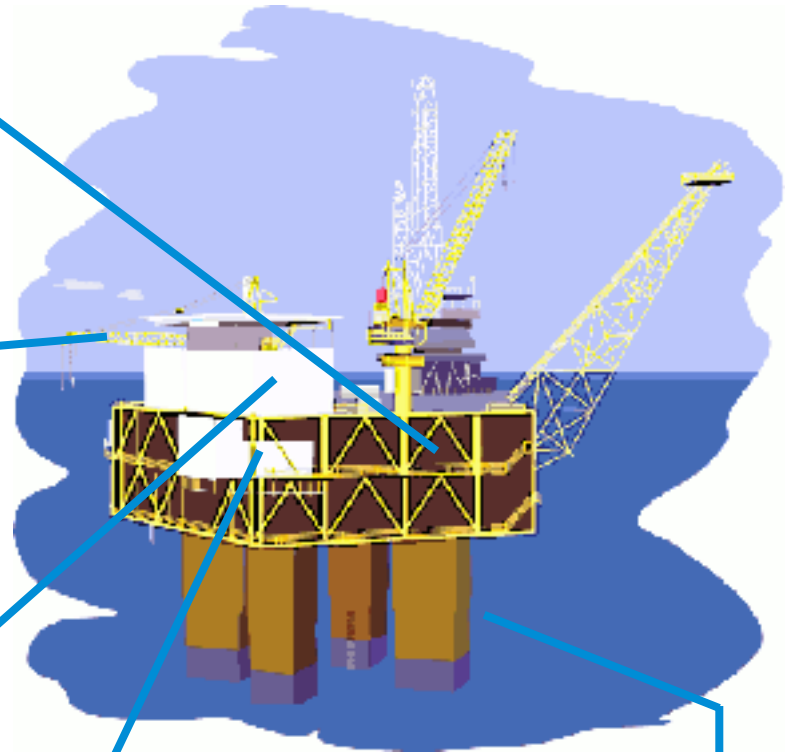
“I’ve never been involved in the Safety Case. Ever. On any rig.”

“People get confused by 1E-6/yr etc type terminology”

“You have people in silos doing different assessments (SIL, HAZOP etc) but that doesn’t help us with Operational Risk Assessment”

“In isolation, people don’t realise the importance of their job. If they can see the bigger picture, they will understand the role their job has in preventing major accident events.”

“This is the first time anyone involved in updating the Safety Case has consulted the general workforce”



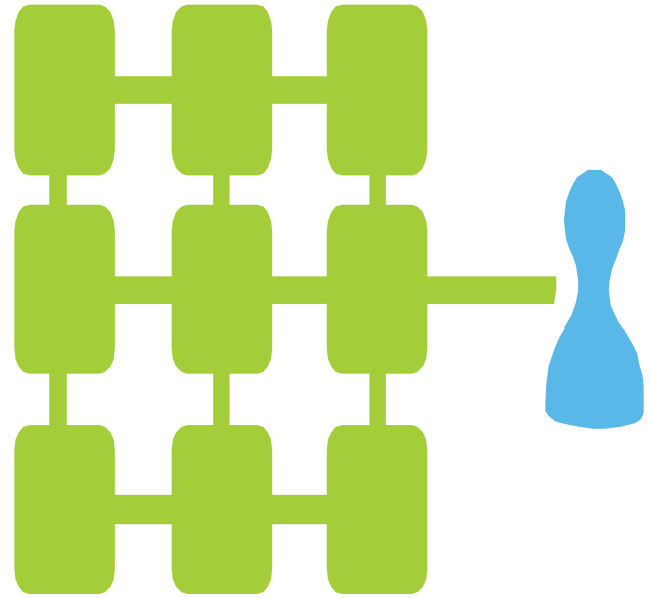
Some general themes

What it should have been	What it became
Accurate reflection of site, systems and practices	Inaccurate, misleading or 'aspirational'
Opportunity for self appraisal	Information gathering exercise
A clear demonstration that risks are ALARP	A series of technical studies
Opportunity for corporate learning and dialogue with workforce	An outsourced documentary exercise
Have some relevance throughout the organisation	A document for the "safety elite"
Mainly for self-improvement	Mainly for compliance
A 'living document' used by many	A document on a shelf used by few

Influencing Safety Performance in Organisations

Influencing Performance – Systems

- Organisational Structures
- Policy & Procedures
- Plant design & layout
- Risk Assessment
- Hazard ID
- Training
- Communication
- Performance Metrics
- Audit



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Influencing Performance – Behaviour

- Following Rules
- Adopting Procedures
- Role Modelling
- Breaking Rules
- Cutting Corners
- Attending meetings
- Follow – up
- Close out of Actions
- Reporting incidents



Influencing Performance – Groups

- Hazard Appreciation
- Shared Values
- Local Leadership
- Shared Beliefs
- Perception of Good Performance
- Morale
- Myths and Legends
- Heroes

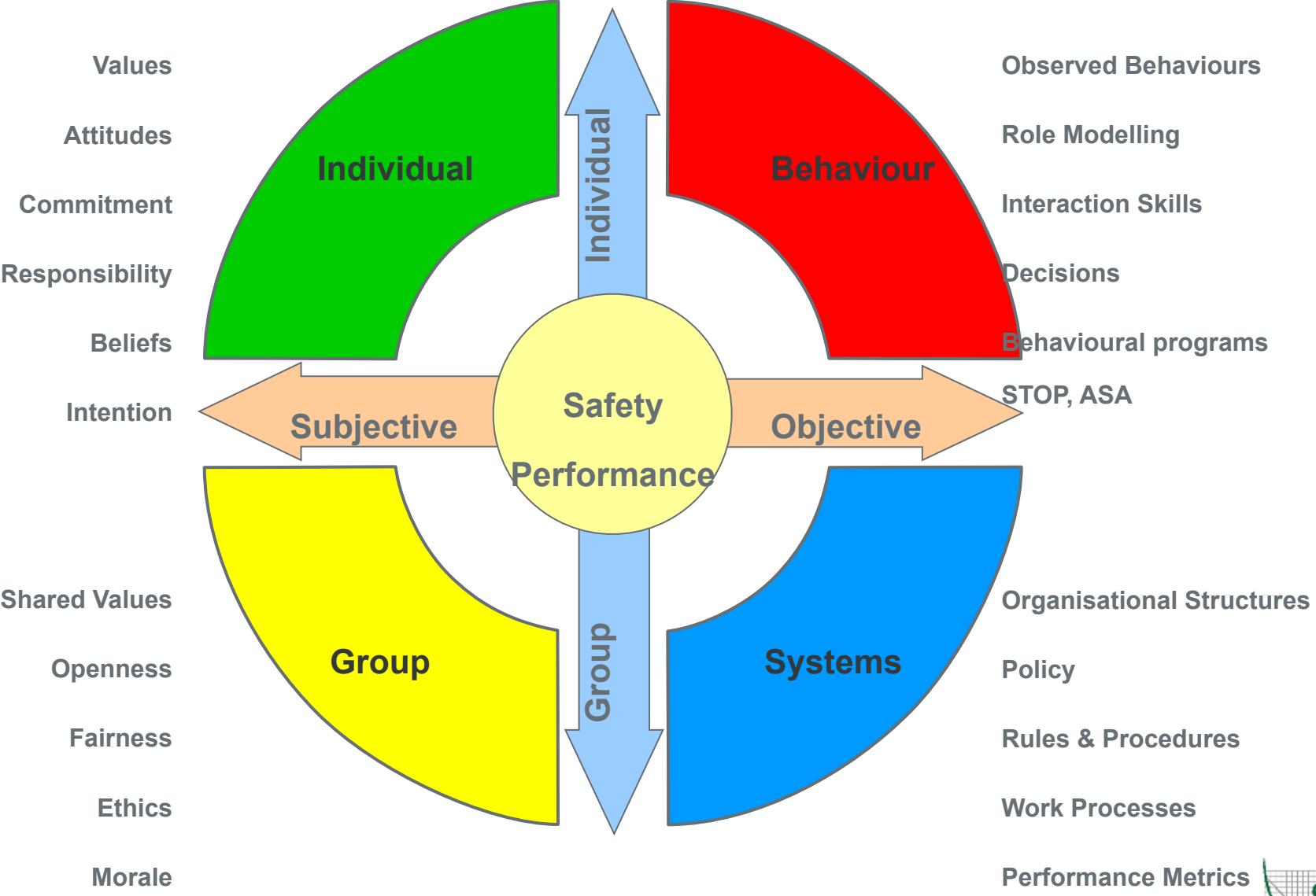
18 →	Lab Technician 	Where the sample valve is cold, use the gas torch to warm the valve housing. STOP • → Do not use lighters or any other naked flames to ignite gas torch due to potential ignition of flammable atmosphere
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Influencing Performance – Individual

- Values
- Beliefs
- Experience
- Attitude
- Motivation
- Mood
- Brain
- Health



Influencing Performance – An Interaction



So you have a Safety Case So what?



Safety Cases – Opportunity for engagement

“... safety has to be organized by those who are directly affected by the implications of failure. These people are in the best position to determine the detailed measures necessary on their own particular installation to achieve the safety objective.”



If the Safety Case is going to be a meaningful exercise, it is vital that it reflects the experience, knowledge and opinions of all those affected by the operation in question.

Safety Cases – Engaging People: Before

Setting the vision

- What do people want the safety case to be?
- How would they use it?
- How does it interface with the broader risk management process?
- Create a sense of ownership



Practicalities

- What have been the pros/cons of current hazard management arrangements?
- What platform or range of platforms would suit which user?
- What additional content would be useful?

Safety Cases – Engaging People: During

Factual

- Up to date operational information
- Contribution to HAZOP/HAZID/ bowtie workshops etc
- Review of external input
- Experience of operational problems or near misses.

Opinion

- Good enough?
- Better options?



Safety Cases Engaging People: After

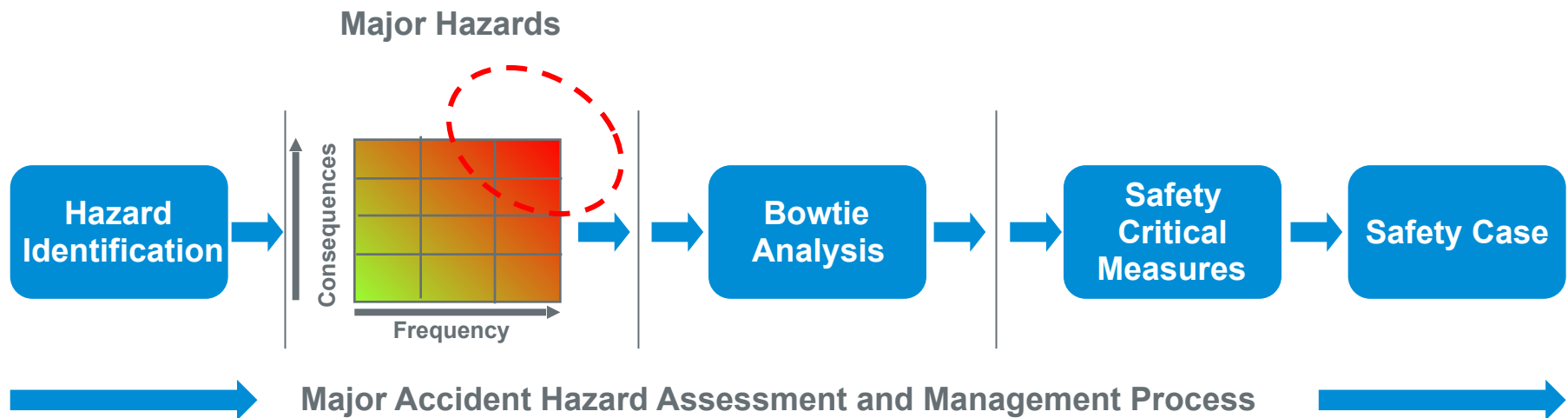
- Communicate **effectively** to personnel at all levels
- Not communicating detail, but overview, conclusions, key learning points
- Make relevant to people's routine jobs
- Applies to office based decision makers *and* operators
- Use appropriate terminology



Safety Case Roll Out and Training: Aims

Develop and Deliver a Programme:

- To 'communicate' the safety case
- To engage personnel at all levels
- To improve major accident hazard awareness and process safety culture



Safety Case Roll Out & Training: Delivery

- Integrated Team
- Visual Materials
- Applied Safety Critical Controls to people's routine work activities
- Workshop Based
- Engagement Exercises



Safety Case Rollout Outcomes – Anonymous

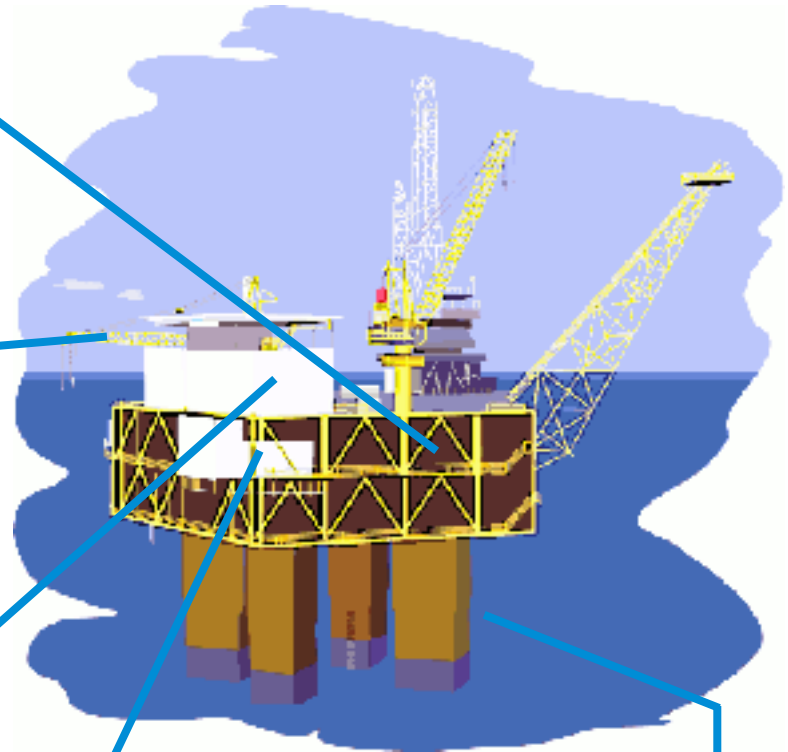
“Effort has been made to communicate risk in a way that makes sense”

“I see the point and purpose of the Safety Case”

“I would definitely report an issue with a safety critical control measure now”

“I now understand the safety critical measures that relate to my routine work – I will do better shift handovers now”

“The Safety Case is a useful document we can use it as a reference in a day to day context”



Top tips for a 'living' Safety Case

- **Have a bold vision** for what the Safety Case is for and what it should achieve
- **Know who the readership will be** and make sure that relevant parts of the document are accessible to them.
- Make sure that the **Safety Case tells a clear story** and that all parts of the document support the telling of that story
- **Make the document accessible**, navigable and comprehensible whether it's paper, PDF or web-based.
- **Involve the workforce** (including senior management) when developing the vision, when preparing the document, when reviewing the document, when rolling it out and when revising it to reflect changes.
- **Remember that the journey of producing the document is as important as the document itself.**

